

APPENDIX A
DAILY SAFETY MEETING LOG

SAFETY MEETING LOG

Project Name: _____ Date: _____

Field Investigator(s) _____

Work Site _____

Physical Hazards _____

Chemical Hazards _____

Safety Equipment on Site _____

Personal Protection Levels and specific Equipment _____

| <i>The above hazards and controls have been adequately explained to me.</i> | | |
|---|---------|-----------|
| Name | Company | Signature |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Site Safety Officer: _____ Site Manager _____

Checked By: _____ Date: _____

APPENDIX B

ACCIDENT/INCIDENT FIELD REPORT FORM

ACCIDENT/INCIDENT REPORT FORM

(Filled out by Site Manager or employee, given to HSO/SSO,
filed in employee's H&S record file)

Person notified _____

(Ex: Site Mgr, HSO, SSO, or Project Manager)

Name of ill or injured person: _____

Date: _____ Time: _____ Supervisor: _____

Site Name and Location: _____

Weather (clear, rain, snow, etc.): _____

Nature of illness/injury: _____

Symptoms: _____

Action Taken: Time off _____ First Aid _____ Medical _____ Oxygen _____

Transported by: _____

Witnessed by: _____

Facility treating (Hospital's name): _____

Treatment: _____

Comments: _____

What was the person doing at the time of the accident/incident? _____

Personal protection clothing worn and equipment used: _____

Cause of accident/incident: _____

What immediate action was taken to prevent reoccurrence? _____

Additional comments: _____

Reporting Employee's Signature Date

Supervisor's Signature Date

Reviewed by OHSM Date

APPENDIX C

MAP AND ADDRESS TO THE NEAREST HOSPITAL

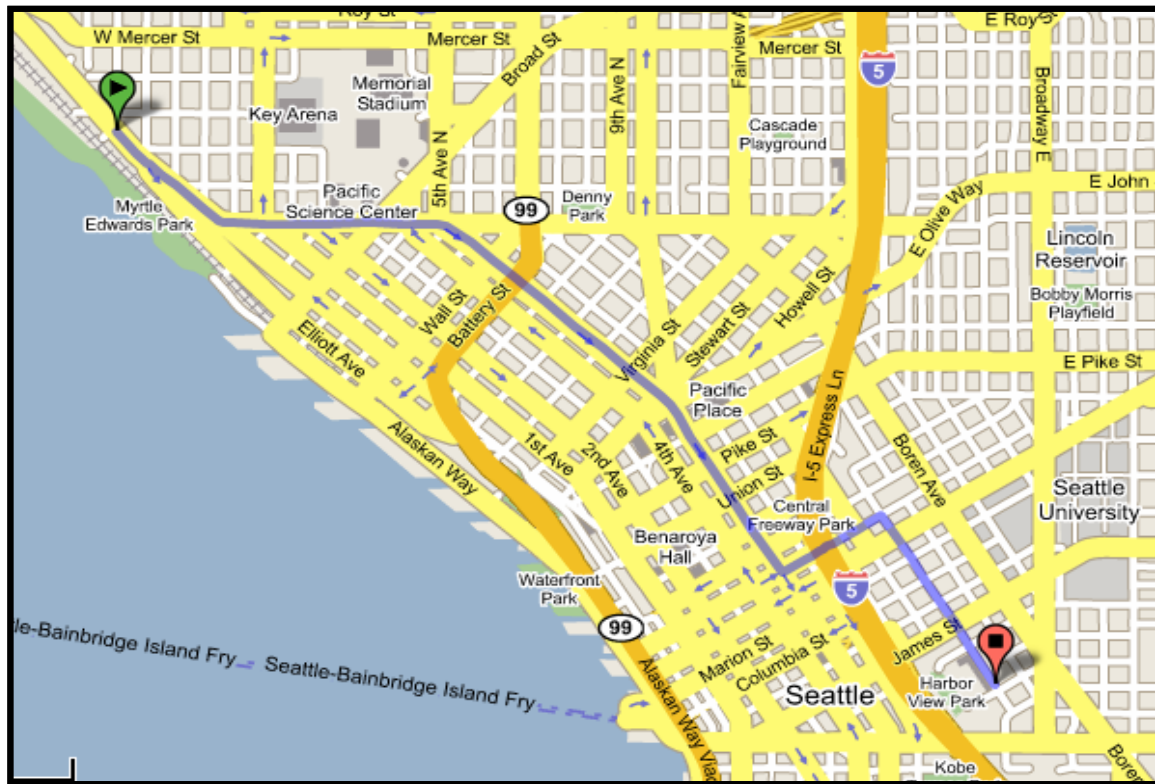
Directions to Nearest Hospital

Start: 333 Elliot Ave W
Seattle, WA 98119

End: 325 9th Ave
Seattle, WA 98104

Distance: 2.5 miles

Time: Approximately 10 minutes



- 1 Head southeast from Elliot Ave W - go 0.1 mi
- 2 Continue on Western Ave W - go 0.2 mi
- 3 Bear left at Denny Way - go 0.4 mi
- 4 Bear right at 5th Ave - go 1.1 mi
- 5 Turn left at Spring St - go 0.2 mi
- 6 Turn right at 9th Ave - go 0.4 mi

APPENDIX D
SPECIFICATION SECTIONS

**333 ELLIOTT AVENUE WEST PROJECT
SECTION 02113
SITE HEALTH AND SAFETY**

PART 1 – GENERAL

1.1 SUMMARY

- A. For all work related to soils excavation and temporary erosion and sedimentation control the Contractor shall prepare and implement a hazardous materials operations Health and Safety Plan (HASP) in accordance with all federal safety and health standards for the Contractor's various anticipated workers' health and safety hazards.
- B. The Contractor shall prepare and implement HASPs that will cover each of the Contractor's Sub-contractors
- C. The Owner's representative will implement perimeter health and safety monitoring as described in Part 3 of this section to ensure that site work does not impact the surrounding community.

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the by the basic designation only. The most recent version of the publication and test method shall be applicable in all cases.
- B. The Site-specific HASP shall be consistent with the most recent published requirements of:

CODE OF FEDERAL REGULATIONS (CFR)

| | |
|-------------|--|
| 29 CFR 1910 | Federal Occupational Safety and Health Act OSHA General Health and Safety Standards |
| 29 CFR 1926 | OSHA Construction Safety and Health Standards |

WASHINGTON ADMINISTRATIVE CODE (WAC)

| | |
|---------|--|
| 296-24 | General Safety and Health Standards |
| 296-62 | General Occupational Health Standards |
| 296-155 | Safety Standards for Construction Work |
| 296-800 | Safety and Health Core Rules |
| 296-62 | General Occupational Health Standards Air Contaminants |

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Other publications which may affect this contract include:

1. American Conference of Governmental Industrial Hygienists (ACGIH), Threshold Limit Values (TLVs) and Biological Exposure Indices (Current ed.)
2. NIOSH/OSHA/USCG/EPA, Occupational Safety and Health, Guidance Manual for Hazardous Waste Site Activities; DHHS (NIOSH) Pub. No. 85-155, October 1985.
3. National Institute for Occupational Safety and Health (NIOSH) Publication, Manual of Analytical Methods, 3rd Ed., Vol. 1 and 2
4. National Institute for Occupational Safety and Health (NIOSH) Publication No. 80-106, Criteria for a Recommended Standard: Working in Confined Spaces
5. American National Standards Institute (ANSI) Standard Z41-1991, Personal Protection Protective Footwear
6. ANSI Standard Z87.1-1989, Practice for Occupational and Educational Eye and Face Protection
7. ANSI Standard Z88.2-1992, Practices for Respiratory Protection
8. ANSI Standard Z88.6-1984, Physical Qualifications for Respirator Use
9. ANSI Standard Z89.1-1986, Protective Headwear for Industrial Workers - Requirements
10. ANSI Standard Z117.1-1989, Safety Requirements for Confined Spaces
11. ANSI Standard Z358.1-1990, Emergency Eyewash and Shower Equipment

1.3 SUBMITTALS

- A. Six (6) copies of the Site-specific HASP shall be submitted to the Owner's Representative within 17 days following the Notice to Proceed. Contractor will NOT be allowed to mobilize Work crews to the Site until the HASP has been submitted to and reviewed by the Owner's Representative. (Owner's Representative will review the HASP for completeness only, and WILL NOT APPROVE IT.)
- B. Revisions: Revise the HASP prior to start of Work to accommodate changes requested by the Owner's Representative, Owner, and/or regulatory agencies with jurisdiction. Post at least one (1) copy of the accepted HASP at Contractor's Site office and at each of the subcontractor's offices. One (1) additional copies will be made available underground utilities contractors.
- C. Monthly health and safety activities report.

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- D. Employee training and medical certification, to Owner's Representative for review, within 7 days of receiving the Notice to Proceed.

1.4 CONTRACTOR'S RESPONSIBILITIES

- A. Site-specific health and safety procedures including a detailed accident prevention plan are required due to the potentially hazardous conditions at the project site. Procedures will include documented periodic inspections by qualified personnel of site working conditions and adherence to HASP provisions. These procedures and required equipment shall be described in a HASP prepared by Contractor.
- B. Contractor shall become familiar with the potential hazardous health and safety conditions and risks associated with the Work. Contractor shall determine the HASP guidelines and requirements as a result of his initial Site survey, review of available existing information, an evaluation of potential hazards, and/or other applicable sources.
- C. The Owner has not conducted a comprehensive survey of underground utilities at the site. The Contractor shall conduct such a survey prior to conducting excavation at the site.
- D. Contractor shall also implement, maintain, and enforce the HASP procedures when appropriate both prior to and during all phases of the Work
- E. All Contractor's and the Subcontractors' workers (of those Subcontractors that have adopted the HASP), that are directly involved in field activities on this project, are required to abide by the provisions of the Contractor's HASP.
- F. Should any unforeseen or site-specific safety related factor, hazard, or condition become evident during the performance of the work at this Site, it shall be Contractor's responsibility to bring such to the attention of Owner's Representative both verbally and in writing as quickly as possible for resolution. Contractor shall take prudent action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.
- G. The HASP developed by the Contractor shall also include provisions for Work related to initial Site preparation prior to demolition of existing pavement and facilities and/or construction, and/or installation of the new facilities described in this Contract. It shall be the responsibility of Contractor to conduct whatever testing and monitoring it deems necessary to assure a safe operation during the initial Site preparation work.
- H. Inform all workers and the visitors to the Site of the potential presence of naphthalene vapors and the importance of using the prescribed safety precautions to ensure their individual safety and the safety of others at the site.
- I. Failure on the part of Contractor to follow the HASP or to continue any Work in an unsafe manner may result in suspension of the Work. The Contractor shall not be

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entitled to extra compensation for health and safety related suspensions, nor shall the Contractor's completion date be extended.

1.5 HEALTH AND SAFETY PLAN

- A. Prepare Contract specific HASP, prior to commencement of initial site mobilization, under the supervision of and signed by the Contractor's Health and Safety representative. The HASP shall effectively incorporate and implement all required City, Regional, State, and Federal health and safety provisions.
- B. The HASP shall address the presence of soil and water contaminated with naphthalenes and carcinogenic polynuclear aromatic hydrocarbons (cPAHs). Details regarding the specific type, concentrations and distribution of contaminants to be addressed in the site safety and health plan are provided in the Site Characterization Report, by Environmental Partners, Inc. (April 2002) and in the figures included in the Engineering Plan prepared by Shannon & Wilson, Inc.
 - 1. Workers involved in excavation and/or handling of contaminated/impacted soil and groundwater shall be in compliance with Hazardous Waste Operations and Emergency Response (HAZWOPER) Training in accordance with WAC 296-62.
 - 2. Workers shall be trained in the purpose, proper selection, fitting, use, and limitations of personal protective equipment (PPE), including gloves, protective clothing, and respirators.
 - 3. The content of WAC 173-340-810 (Model Toxics Control Act Cleanup Regulation, Worker Safety and Health). WAC 173-340-810 states that requirements under the Occupational and Safety Health Act (OSHA) and the Washington Industrial Safety and Health Act (WISHA) are applicable to the type of remedial activities that will be conducted at this site (excavation and handling of naphthalene and cPAH-contaminated soil).
- C. Update the HASP, under the direction of the Contractor's Health and Safety representative, as necessary, as new or unforeseen conditions are encountered during Contract implementation.
- D. Contractor's written HASP should include, but not be limited to:
 - 1. Engineering controls to reduce the hazard of equipment operation and exposure to Site hazardous chemicals. At a minimum, engineering controls shall include:
 - a. Rollover cages for bulldozers, backhoes, loaders, and tractors
 - b. Back-up alarms for all trucks and heavy equipment
 - c. Wetting of soil to reduce dust during excavation and grading activities
 - d. Decontamination of equipment leaving the Site
 - e. Barricades for open trenches and excavations
 - f. Shoring
 - g. Non-sparking equipment includes saws, buckets, teeth, shovels, etc. for welding in areas subject to ignitable gas conditions.

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- h. Local ventilation systems (if needed).
 - 2. A worker protection program demonstrating the methods by which all applicable health and safety requirements described in WAC 296-62 will be met. As a minimum, this program shall include the following:
 - a. Air monitoring for naphthalene vapors.
 - b. Respiratory protection
 - c. Personal protective equipment
 - d. Personnel hygiene practices
 - e. Equipment and personnel decontamination procedures
 - f. Administrative controls
 - g. Engineering controls
 - h. Employee training
 - i. Signage
 - j. Record keeping
 - 3. A task hazard analysis, including chemical and physical hazards (such as naphthalene and cPAH-contaminated soil, vapor exposure and electrical shock), allowable WA L&I exposure levels, threshold limit values, and Engineering, Administrative and PPE controls.
 - 4. Employee training and medical monitoring permits
 - 5. Personnel protective equipment
 - 6. Decontamination procedures
 - 7. An emergency response plan for accident, injury or fire, including provisions for immediate removal to a hospital or a doctor's care any person who may be injured on the Site including an evacuation plan, routes to medical treatment, and emergency telephone numbers including hospital, ambulance, fire, sheriff/police, poison control, Owner's Representative, and others as deemed necessary.
 - 8. A list of safety and monitoring equipment and their on-site location.
 - 9. Delineation and description of temporary facilities and/or special construction procedures required to physically separate the Support, Contaminant Reduction, and Exclusion Zones.
 - 10. Air monitoring procedures to protect workers and prevent off-site exposures above applicable regulatory criteria, including equipment, action levels, frequency of testing, recommended responses, and frequency of safety equipment calibration.
- E. Assign a specific individual as a full-time Site Safety and Health Officer (SSHO) to be present at all times while applicable Contract work is being conducted.

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SECTION 02113 - SITE HEALTH AND SAFETY**

- F. The SSHO will be responsible and authorized to supervise and enforce compliance of the Contractor's HASP.

1.6 CONTRACTOR SAFETY EQUIPMENT

- A. As part of the safety program, Contractor shall maintain at the Site safety equipment applicable to the Work as prescribed by the governing safety authorities and all articles necessary for giving first aid to the injured, including, but not limited to:
 - 1. First aid kits
 - 2. Fire suppression equipment (appropriate to location and type of flammable materials present)
 - 3. Emergency eye wash facilities
 - 4. Personnel decontamination facilities and equipment
- B. Contractor shall train all personnel in use of the appropriate safety equipment that would be utilized during the course of their Work. It is the responsibility of the SSHO, or person(s) in authority, to ascertain that all safety equipment is being used when appropriate.
- C. At a minimum, all personnel on-site shall wear a hardhat, orange reflective work vest, steel-toed and shank boots, hearing protection when required by high noise levels, and safety glasses.
- D. Contractor shall provide additional personal protective equipment (PPE) other than respiratory PPE for use by Owner's employees and representatives and other visitors authorized by Owner. PPE shall be provided in sufficient numbers and sizes that at least ten visitors may be accommodated at one time. PPE shall be appropriate for any location on the Site, during the conduct of Work at that time. This PPE shall include hard hats, safety glasses, orange reflective vests, protective clothing and boot covers. Respiratory PPE must be provided by Owner's employees or visitors and proof of a respiratory fit test specified to the equipment brought to the Site must be in possession.

1.7 SITE HEALTH AND SAFETY OFFICER

- A. Provide a person designated as the SSHO who is thoroughly trained in rescue procedures and the use of safety equipment, including methane, photoionization, and hydrogen sulfide gas detectors. The SSHO must be present at all times while Work is being performed and implement the written HASP and conduct required testing.
- B. Provide the SSHO with the delegated authority to order any person or worker on the Site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from conducting Work at this Site.

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- C. The SSHO shall have taken a course satisfying the training requirements of WAC 296-62-3040 for Hazardous Waste Site Operations and hazardous waste operations supervisor course. A copy of the SSHO's 40 hour OSHA Hazwoper Certificate (with current 8-hour refresher) and 8-hr. hazardous waste operations supervisor certificate shall be submitted to Owner's Representative, within 10 days after receipt of Notice to Proceed.
- D. The SSHO is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the Site.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 PERIMETER MONITORING

- A. The Owner's representative will perform perimeter air monitoring of dust and solvent vapors. Monitoring will be conducted using the equipment listed on the appropriate frequency:
 - 1. "Puff" Cartridges;
 - a. "Puff" cartridges attached to personal-sized air pumps will be placed on the site perimeter and operated on a continuous basis for 8 hours at a time.
 - b. Samples will be collected each day for a week once the excavation has reached 15 feet in depth at the southwest corner of the site. If naphthalene is detected at high concentrations after the first week, then sample collection will continue on a daily basis until the naphthalene levels drop off. After the first week of sampling, or once there has been a significant decrease from the initial readings, samples will be collected once a day until the excavation has been backfilled or the perimeter samples are non-detect for 5 days in a row following excavation of the source area..
 - 2. Photoionization Detector (PID)
 - a. The PID shall be fitted with a 10.4 KeV lamp and calibrated to detect naphthalene.
 - b. The PID will be operated constantly in survey mode.
 - c. Areas to be surveyed include work areas where excavation is being conducted, loading areas, and the site perimeter.
 - 3. Visual and Olfactory Observations: the Owner's representative will monitor the site constantly during working hours for naphthalene odor or visible dust emissions.

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4. Sampling results will be recorded in a logbook and reported to the Owner in a written field memorandum at the end of each week.

3.2 ACTION LEVELS

- A. The action level for air monitoring is 5 parts per million . This is 50 percent of the time-weighted average exposure level for naphthalene allowed under WAC 296-841-200.
- B. If the airborne concentration of naphthalene is found to exceeded the action level at any time using any of the instruments described in this section, the Contractor shall take the following steps to ensure the health and safety of site personnel and the surrounding community.
 1. Stop work in the area where the concentration of naphthalene in the air exceeds the action level.
 2. Ensure that all site personnel have the appropriate PPE.
 3. Institute engineering controls to disperse vapors.

3.3 ENGINEERING CONTROLS

- A. If at any time the perimeter monitoring indicates that the threshold concentration has been exceeded, the Owner's representative may stop the work until the contractor institutes engineering controls to mitigate a vapor or dust release as described below.
- B. If excessive dust is observed the Contractor shall wet the area using water hoses, wetting trucks, or an alternative dust suppression method.
- C. Vapors that exceed the action level concentration shall be dispersed using blowers.

END OF SECTION

333 ELLIOTT AVENUE WEST PROJECT
SECTION 02110
EXCAVATION, HANDLING, AND DISPOSAL OF CONTAMINATED SOIL

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Excavation drawings included with the Engineering Plan Prepared by Shannon & Wilson, Inc. showing the estimated lateral and vertical extents of contaminated soil.

1.2 SUMMARY

- A. Section includes:

1. Excavation of contaminated soil within the project site as indicated by the Excavation Drawings in the Engineering Plan and as directed by the Owner's representative.
 - a Site soil generally consists of variable fill consisting of either poorly-graded to well-graded sand with trace to slight amounts of silt or silt with trace to slight amounts of sand.
 - b Groundwater is expected to be encountered at approximately six to ten feet below ground surface (bgs).
 - c Site investigations indicate that several areas of site soil and/or groundwater that will be encountered during construction contain naphthalenes, and carcinogenic poly-nuclear aromatic hydrocarbons (cPAHs), that likely originated from a former fuel merchant and/or creosote works at the site, at concentrations that exceed Washington Model Toxics Control Act (MTCA) Method A cleanup levels.
 - d Soil containing less than 10,000 mg/kg of any contaminant(s) may be disposed of at any Subtitle D landfill. Soil containing between 10,000 mg/kg and 100,000 mg/kg may be disposed of at a Subtitle D landfill, but cannot be disposed of in the state of Washington. Contaminant-saturated soil containing greater than 100,000 mg/kg of any contaminant(s) must be disposed of at a Subtitle C facility in a manner equivalent to a Resource Conservation and Recovery Act (RCRA) F034 waste.
 - e Approximate locations of contaminated material are shown on the figures included with the Engineering Design Report (EDR) prepared by Shannon & Wilson, Inc. Chemical analysis of contaminated material has been performed by the Owner and is summarized in Site Characterization Report, by Environmental Partners Inc. (April 2002). The Contractor shall perform an independent evaluation of the site characterization data.
 - f The Owner's Representative shall be notified immediately if contaminated material is discovered which has not been previously identified or if other discrepancies between data provided and actual field conditions are discovered. Backfill material is not available onsite.
- 2 Contractor shall notify the Owner's Representative 14 days prior to start of excavation of contaminated material. The Contractor shall be responsible for contacting regulatory agencies in accordance with the applicable reporting requirements.

1.3 REFERENCES

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EXCAVATION, HANDLING, AND DISPOSAL OF CONTAMINATED SOIL

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the by the basic designation only. The most recent version of the publication and test method shall be applicable in all cases.
- B. All contaminated materials shall be excavated, handled, and disposed of in accordance with these regulations.

CODE OF FEDERAL REGULATIONS (CFR)

- 49 CFR 107 Hazardous Materials Program Procedures
- 49 CFR 172 Hazardous Materials Table, Special Provisions, Hazardous Material Communications, Emergency Response Information, and Training Requirements

WASHINGTON ADMINISTRATION CODE (WAC)

- 173-340 The Model Toxics Control Act Cleanup Regulation (Publication No. 94-06; amended January 1996; promulgated revision, February 2001)
- 299-62 General Occupational Health Standards Air Contaminants

1.4 DEFINITIONS

- A. Hazardous Material. A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated pursuant to the Hazardous Materials Transportation Act, 49 U.S.C. Appendix Section 1801 et seq. The term includes materials designated as hazardous materials under the provisions of 49 CFR 172.101 and 172.102 and materials that meet the defining criteria for hazard classes and divisions in 49 CFR 173. For the purposes of this specification section, soil contaminated with naphthalenes and/or cPAHs is considered a hazardous material.

1.5 SUBMITTALS

- A. Contaminated Soil Management Plan. Prior to start of work, a plan detailing the manner in which contaminated soil shall be managed and describing the types and volumes of these wastes anticipated to be managed as well as the management practices to be utilized. The plan shall identify waste minimization methods; shall propose facilities to be utilized for treatment, storage, and/or disposal; shall identify areas on-site where contaminated soil is to be handled; shall identify whether transfer facilities are to be utilized; and if so, how the wastes will be tracked to ultimate disposal. The plan must incorporate the Ecology-approved requirements of the EDR.

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- B. Qualifications. Copies of the current certificates of registration issued to the Contractor and/or subcontractors or written statements certifying exemption from these requirements.
- C. Shipping Documents and Packagings Certification. All transportation related shipping documents to the Owner's Representative including draft bills of ladings for contaminated soil, waste profiles, for review a minimum of 14 days prior to anticipated pickup. Packaging assurances shall be furnished prior to transporting hazardous material; "generator copies" bills of ladings shall be furnished when shipments are originated.
- D. Excavation and Handling Work Plan. Work Plan shall include:
 - 1. Schedule of Activities
 - 2. Method of excavation and equipment to be used
 - 3. Shoring or side-wall slopes proposed
 - 4. Dewatering plan
 - 5. Storage methods and locations for liquid and solid contaminated material
 - 6. Borrow sources and haul routes
 - 7. Disposal methods
 - 8. Decontamination procedures
 - 9. Spill contingency plan
- E. Test Reports: Backfill materials and surveys.
- F. Contaminated Soil Disposal Paperwork. Contaminated soil and water removal volumes and records.
- G. Health and Safety Plan. Include a description of health and safety procedures as related to contaminated soil and water removal, and as related to operations associated with naphthalene- and cPAH-contaminated soils and water in the Site Health and Safety Plan (HASP) as described in Section 02113– Site Health and Safety.

1.6 QUALITY ASSURANCE AND QUALITY CONTROL

- A. Quality Assurance (QA): refers to those actions (including inspections, verifications, audits, testing, and evaluation), taken by the Owner or the Owner's representative intended to provide adequate confidence that the materials and workmanship provided by the Contractor conform to the Contract Documents and any applicable regulatory requirements.
- B. Quality Control (QC): refers to those actions taken by the Contractor to document a quality installation that meets or exceeds the requirements in the Project Plans, Drawings, and Specifications. The Contractor is responsible for all QC for the Project.
- C. Perform work in accordance with federal and Washington State standards.

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- D. Maintain one copy of all documents and documentation on site.
- E. Qualifications
 - 1 License and Certification
 - a. Washington State Contractor's License.
 - b. The Contractor and/or subcontractors transporting hazardous materials shall possess a current certificate of registration issued by the Research and Special Programs Administration (RSPA), U.S. Department of Transportation, when required by 49 CFR 107, Subpart G.
 - 2 Experience: Name and location of at least three similar projects
 - 3 Training
 - a. The Contractor's hazardous materials employees shall be trained, tested, and certified to safely and effectively carry out their assigned duties. The Contractor's employees transporting hazardous materials or preparing hazardous materials for transportation shall be trained, tested, and certified in accordance with 49 CFR 172.
 - b. All employees engaging in contaminated soil excavation, handling, and/or disposal shall have hazardous waste operations and emergency response (HAZWOPER) training in accordance with 29 CFR 1910.120
 - c. Comply with Section 02113, Health and Safety.
- F. Regulatory Requirements
 - 1 Permits and Licenses
 - a. Obtain and pay for all required permits from the City of Seattle and/or King County, state and federal agencies, as appropriate.
 - b. Prepare required notices and forms for the work.
 - 2 Waste Profiling and Manifesting
 - a. Hazardous and Dangerous Wastes: Prepare in accordance with Section 02120 – Off-site Transportation and Disposal of Wastes.

PART 2 - PRODUCTS

2.1 VISQUEEN

- A Chemically resistant geomembrane liner. Non-reinforced geomembrane liners shall have a minimum thickness of 20 mils. Scrim reinforced geomembrane liners shall have a minimum weight of 40 lbs. per 1,000 square feet. The ground surface on which the geomembrane is to be placed shall be free of rocks greater than 0.5 inch in diameter and any other object, which could damage the membrane.

2.2 SPILL RESPONSE MATERIALS

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EXCAVATION, HANDLING, AND DISPOSAL OF CONTAMINATED SOIL

- A. The Contractor shall provide spill response materials including, but not limited to the following: containers, adsorbents, shovels, and personal protective equipment.
- B. Spill response materials shall be available at all times in which hazardous materials are being handled or transported.
- C. Spill response materials shall be compatible with the type of materials and contaminants being handled.

PART 3 – EXECUTION

3.1 EXISTING STRUCTURES AND UTILITIES

- A. No excavation shall be performed until site utilities have been field located. Utilities encountered that were not previously shown or otherwise located shall not be disturbed without written approval from the Owner's Representative.

3.2 IDENTIFICATION OF CONTAMINATED SOIL

- A. The site has been divided into a grid of work zones as indicated in the figures included in the Engineering Plan provided by Shannon & Wilson, Inc. The assumed waste designation of the soil in each lift in each work zone has been determined and is listed in the figures as clean soil, contaminated soil containing less than 1% contamination, contaminated soil containing between 1% and 10% contamination and, and contaminated soil containing greater than 10% contamination. The Contractor shall handle the soil as indicated by the waste designation to be field-confirmed through soil screening and sampling and analysis when appropriate. The waste designation of soil removed during soil nail installation shall be based on the waste designation of the soil in the adjacent lift as indicated in the EDR drawings.

3.3 EXCAVATION OF CONTAMINATED SOIL

- A. The Contractor's competent person shall be on-site when work is being performed in excavations, and shall inspect excavations prior to entry by workers. The competent person must evaluate for all hazards, including atmospheric, that may be associated with the work, and shall have the resources necessary to correct hazards promptly. The Owner and Owner's Representative are not responsible for Contractor health and safety. Prior to digging, the appropriate digging permit must be obtained. All underground utilities in the work area must be positively identified by a utility locating service. The Contractor must physically verify underground utility locations when any adjacent construction work is expected to come within 3 feet of the underground system. If construction is parallel to an existing utility the utility shall be exposed by hand digging, or Owner-approved methods, every 100 feet if parallel within 5 feet of the excavation. Trench and shoring systems must be identified in the accepted safety plan and activity hazard analysis. Extreme care must be used when excavating near direct burial electric underground cables.

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- B. All contaminated soil shall be direct-loaded onto trucks, roll-off boxes, or rail cars for off-site disposal.
- C. The excavation shall be shored in accordance with the shoring plans using soldier piles and lagging.

3.4 CONFIRMATION SAMPLING AND ANALYSIS

- A. The Owner's Representative shall be present to observe the removal of contaminated material from the site. The Owner's Representative will collect sidewall confirmation samples during excavation and excavation bottom samples once the final excavation depth has been reached.
- B. Additional screening, excavation, and sampling may be required based on analytical testing results.

3.5 CONTAMINATED MATERIAL STORAGE

- A. Contaminated material may be placed in temporary storage immediately after excavation. The following paragraphs describe acceptable methods of material storage for contaminated soil. Storage units shall be in good condition and constructed of materials that are compatible with the material or liquid to be stored. If multiple storage units are required, each unit shall be clearly labeled with an identification number and a written log shall be kept to track the source of contaminated material in each temporary storage unit.
 - 1. Stockpiles. Stockpiles shall be constructed to isolate stored contaminated material from the environment. Stockpiles shall be constructed to include:
 - a. Geomembrane cover to prevent precipitation from entering the stockpile. Non-reinforced geomembrane covers shall have a minimum thickness of 10 mils. Scrim reinforced geomembrane covers shall have a minimum weight of 26 lbs. per 1,000 square feet. The cover material shall be anchored to prevent it from being removed by wind.
 - b. Berms surrounding the stockpile, a minimum of 12 inches in height. Vehicle access points shall also be bermed.
 - c. Storage and removal of liquid, which collects in the stockpile, in accordance with paragraph Liquid Storage.
 - 2. Bulk Containers
 - a. Use approved bulk containers capable of preventing leakage of water or contaminants; containers are to be covered or sealed when active loading is not occurring.
 - b. Clearly label bulk containers in accordance with state and federal requirements.
 - 3. Liquid Storage. Liquid collected from excavations and stockpiles shall be treated using the on-site dewatering treatment system and discharged to the combined sewer.

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3.6 SPILLS

- A. In the event of a spill or release of a hazardous substance, pollutant, contaminant, or oil, the Contractor shall notify the Owner immediately. Immediate containment actions shall be taken to minimize the effect of any spill or leak. Cleanup shall be in accordance with applicable federal, state, and local regulations.
 - 1. Spill cleanup and testing, by the Contractor or the Owner's Representative, shall be done at no additional cost to the Owner.

3.7 DISPOSAL REQUIREMENTS

- A. Off-site disposal of contaminated soil shall be in accordance with Section 02120 – Off-Site Transport and Disposal of Contaminated Soil.
- B. Soil containing less than 10,000 mg/kg of any contaminant(s) may be disposed of at any Subtitle D landfill.
- C. Soil containing between 10,000 mg/kg and 100,000 mg/kg may be disposed of at a Subtitle D landfill, but cannot be disposed of in the state of Washington.
- D. Contaminant-saturated soil containing greater than 100,000 mg/kg of any contaminant(s) must be disposed of at a Subtitle C facility in a manner equivalent to a Resource Conservation and Recovery Act (RCRA) F034 waste. Contaminated soils will be disposed by the Contractor at an approved facility once a profile has been reviewed/approved by Owner's Representative.
- E. Requirements:
 - 1. Description of Treatment, Storage, and Disposal (TSD) Facility and Transporter. The Contractor shall provide the Owner's Representative with EPA identification (ID) numbers, names, locations, and telephone numbers of TSD facilities and transporters. This information shall be contained in the Contaminated Soil Management Plan for approval prior to waste disposal.
 - 2. Status of the Facility. Facilities receiving hazardous waste must be permitted in accordance with 40 CFR 270 or operating under interim status in accordance with 40 CFR 265 requirements, or must be permitted by an authorized state program.
 - 3. Shipping Documents and Packagings Certification. Prior to shipment of any hazardous material off-site, the Contractor shall provide written certification to the Owner's Representative that hazardous materials have been properly packaged, labeled, and marked in accordance with Department of Transportation and EPA requirements.
 - 4. Transportation.
 - a. The Contractor shall use manifests for transporting hazardous wastes as required by 40 CFR 263 or any applicable state or local law or regulation.
 - b. Transportation shall comply with all requirements in the Department of Transportation referenced regulations in the 49 CFR series. The Contractor shall acquire manifests in accordance with the hierarchy established in 40 CFR 262, Section .21.

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- c. The Contractor shall prepare hazardous waste manifests for each shipment of hazardous waste shipped off-site. Manifests shall be completed using instructions in 40 CFR 262, Subpart B and any applicable state or local law or regulation.
- d. Manifests and waste profiles shall be submitted to Owner's Representative for review and approval.

3.8 EXCAVATION OF SOIL OUTSIDE PROJECT SITE BOUNDARIES

- A. Excavation outside of project boundaries will not be performed.

3.9 EMERGENCY CONTACTS

- A. The Contractor shall be responsible for complying with the emergency contact provisions in 49 CFR 172, Section .604. Whenever the Contractor ships hazardous materials, the Contractor shall provide a 24-hr emergency response contact and phone number of a person knowledgeable about the hazardous materials being shipped and who has comprehensive emergency response and incident mitigation information for that material, or has immediate access to a person who possesses such knowledge and information. The phone must be monitored on a 24-hour basis at all times when the hazardous materials are in transportation, including during storage incidental to transportation. The Contractor shall ensure that information regarding this emergency contact and phone number is placed on all hazardous material shipping documents. The Contractor shall designate an emergency coordinator and post the following information at areas in which hazardous wastes are managed:
 - 1. The name of the emergency coordinator.
 - 2. Phone number through which the emergency coordinator can be contacted on a 24-hour basis.
 - 3. The telephone number of the local fire department.
 - 4. The location of fire extinguishers and spill control materials.

3.10 DOCUMENTATION

- A. Provide the following:
 - 1. A narrative report including, but not limited to, the following:
 - a. Quantity of materials removed from each area of contamination.
 - b. Source of backfill.
 - c. Copies of all manifests and land disposal restriction notifications.
 - d. Copies of all certifications of final disposal signed by the responsible disposal facility official.
 - e. Waste profile sheets.

END OF SECTION 02110

**333 ELLIOTT AVENUE WEST PROJECT
SECTION 02120
OFF-SITE TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL**

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes:
1. Transportation and treatment or disposal of soil contaminated with total naphthalenes (naphthalene) and carcinogenic poly-nuclear aromatic hydrocarbons (cPAHs) within the limits of the project site, or as indicated by the Owner's Representative.
 2. The following contaminated materials and debris shall be transported, treated or disposed of in accordance with regulatory requirements.
 - a. Soil containing less than 10,000 mg/kg of any contaminant(s) may be disposed of at any Subtitle D landfill. Soil containing between 10,000 mg/kg and 100,000 mg/kg may be disposed of at a Subtitle D landfill, but cannot be disposed of in the state of Washington. Contaminant-saturated soil containing greater than 100,000 mg/kg of any contaminant(s) must be disposed of at a Subtitle C facility in a manner equivalent to a Resource Conservation and Recovery Act (RCRA) F034 waste.
 - b. Solid wastes, demolition materials, and debris contaminated with hazardous materials.
- B. Related Sections.
1. Section 02113 – Site Health and Safety
 2. Section 02110 – Excavation, Handling, and Disposal of Contaminated Soil

1.2 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. The most recent version of the publication and test method shall be applicable in all cases.

CODE OF FEDERAL REGULATIONS (CFR)

| | |
|------------|--|
| 40 CFR 61 | National Emission Standards for Hazardous Air Pollutants |
| 40 CFR 261 | Identification and Listing of Hazardous Waste |
| 40 CFR 262 | Standards Applicable to Generators of Hazardous Waste |
| 40 CFR 263 | Standards Applicable to Transporters of Hazardous Waste |
| 40 CFR 264 | Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities |
| 40 CFR 265 | Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities |

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| | |
|-----------------------|--|
| 40 CFR 266 | Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities |
| 40 CFR 268 | Land Disposal Restrictions |
| 40 CFR 270 Program | EPA Administered Permit Programs: The Hazardous Waste Permit |
| 40 CFR 279 | Standards for the Management of Used Oil |
| 40 CFR 300 | National Oil and Hazardous Substances Pollution Contingency Plan |
| 40 CFR 302 | Designation, Reportable Quantities, and Notification |
| 49 CFR 107 | Hazardous Materials Program Procedures |
| 49 CFR 172 | Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements |
| 49 CFR 173 | Shippers - General Requirements for Shipments and Packagings |
| 49 CFR 178 | Specifications for Packagings |

KING COUNTY CODE (KCC)

| | |
|--------------|--|
| KCC Title 10 | Solid Waste – Chapter 10.08, Biomedical Wastes, – Chapter 10.30, Construction, Demolition, and Land Clearing Waste |
|--------------|--|

WASHINGTON ADMINISTRATION CODE (WAC)

| | |
|-------------|---|
| WAC 173-303 | Dangerous Waste Regulations |
| WAC 173-340 | The Model Toxics Control Act Cleanup Regulation |
| WAC 296-62 | General Occupational Health Standards |

1.3 DEFINITIONS

- A. Contractor-Owned Waste. A waste generated solely by the Contractor during construction activities.
- B. Dangerous Waste. Solid wastes designated in Chapter 173-303-070 WAC through 173-303-100 as dangerous, or extremely hazardous or mixed waste.

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SECTION 02120 - OFF-SITE TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL

- C. Hazardous Material. A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated pursuant to the Hazardous Materials Transportation Act, 49 U.S.C. Appendix Section 1801 et seq. The term includes materials designated as hazardous materials under the provisions of 49 CFR 172.101 and 172.102 and materials that meet the defining criteria for hazard classes and divisions in 49 CFR 173. For the purposes of this specification section, soil contaminated with naphthalenes and/or cPAHs is considered a hazardous material.
- D. Saturated Soil Waste. Any product-saturated soil or soil containing greater than 100,000 mg/kg of any contaminant(s).
- E. Solid Waste. A material identified in accordance with Chapter 173-303-016 WAC and 40 CFR 261.
- E. Special Waste. A state-only dangerous waste that is solid only (nonliquid, nonaqueous, nongaseous) that is: corrosive waste (WAC 173-303-090 (6)(ii)), toxic waste that has Category D toxicity (WAC 173-303-100(5)), polychlorinated biphenyl (PCB) waste (WAC 173-303-9904 under State Sources), or persistent waste that is not extremely hazardous waste (WAC 173-303-100(6)). Any solid waste that is regulated by the EPA as hazardous waste cannot be a special waste.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01300 – Submittals.
- B. Record Keeping
 - 1. Provide waste management information in the form and format required to file state annual and EPA biennial reports for hazardous waste transported, treated, stored, or disposed of under this contract.
 - 2. Do not forward data directly to the regulatory agency; provide to the Owner's Representative in accordance with Section 01700 – Contract Closeout. Submit with cover letter indicating the contract number, Contractor name, and project location.
- C. Spill Reports
 - 1. In the event of a spill or release of a hazardous substance (as designated in 40 CFR 302), or pollutant or contaminant, or oil (as governed by the Oil Pollution Act [OPA], 33 U.S.C. 2701 et seq.), the Contractor shall notify the Owner's Representative immediately.
 - 2. If the spill exceeds a reporting threshold, follow the pre-established procedures for immediate reporting.
- D. Exception Reports
 - 1. If a manifest copy documenting receipt of Saturated Soil Waste at the treatment, storage, and disposal facility is not received within 35 days of shipment initiation, prepare and submit an exception report to the Owner's Representative.

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- E. Certificates of Disposal/Destruction
 - 1. Certificates documenting the ultimate disposal of any soil containing greater than 100,000 mg/kg within 180 days of initial shipment.
- F. Packaging Certification
 - 1. Transportation-related shipping documents shall be submitted to the Owner's Representative, including; draft land disposal restriction notifications; draft bills of lading for nonhazardous materials; lists of corresponding proposed labels, packages, marks, and placards to be used for shipment; waste profiles and supporting waste analysis documents, for review a minimum of 3 days prior to anticipated waste shipment.
 - 2. Generator copies of, land disposal restriction notifications, used oil invoices/shipment records, bills of lading, and supporting waste analysis documents shall be furnished when shipments are originated.
- G. Notices of Non-compliance and Notices of Violation 1. Address notices of non-compliance or notices of violation by a federal, state, or local regulatory agency issued to the Contractor in relation to any work performed under this contract immediately; cost and schedule delay related to Contractor's actions are not a basis for claims to Owner.
- H. Notices of Non-compliance and Notices of Violation
 - 1. Address notices of non-compliance or notices of violation by a federal, state, or local regulatory agency issued to the Contractor in relation to any work performed under this contract immediately; cost and schedule delay related to Contractor's actions are not a basis for claims to Owner.
 - 2. Provide copies of such notices to the Owner's Representative; furnish relevant documents regarding the incident, coordinate response to the notice with the Owner's Representative prior to submission to the notifying authority, and provide copies of documents submitted to the regulatory authority, including the final reply to the notice, until the matter is resolved.

1.5 QUALITY ASSURANCE

- A. Qualifications
 - 1. Transportation and Disposal Coordinator
 - a. The Contractor shall designate, by position and title, one person to act as the Transportation and Disposal Coordinator (TDC) for this contract. The TDC shall serve as the single point of contact for environmental regulatory matters and shall have overall responsibility for environmental compliance at the site including but not limited to:
 - 1) Accurate identification and classification of hazardous materials.
 - 2) Determination of proper shipping names.
 - 3) Identification of marking, labeling, packaging, and placard requirements.

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- 4) Completion of waste profiles, hazardous waste manifests, bills of lading, exception and discrepancy reports; and all environmental documentation.
- b. The TDC shall have, at a minimum, the following specialized experience in the management and transportation of hazardous waste:
 - 1) Training and current certification under 49 CFR 172, Subpart H.
 - 2) Sixteen (16) hours training on the requirements of 40 CFR 262 - Standards Applicable to Generators of Hazardous Waste.
 - 3) Eight (8) hours training on Land Disposal Restrictions (LDR) requirements of 40 CFR 268.
 - 4) One (1) year of specialized experience in the accumulation and shipment of hazardous waste.
 - 5) The capability to identify required permits, and a working knowledge of federal, state, and local laws, regulations, and guidance.
2. Training
 - a. Contractor's hazardous materials employees shall be trained, tested, and certified to safely and effectively carry out their assigned duties in accordance with Section 01063 – Health and Safety.
 - b. Contractor's employees transporting hazardous materials or preparing hazardous materials for transportation shall be trained, tested, and certified in accordance with 49 CFR 172.
- B. Regulatory Requirements:
 1. Work shall meet or exceed the minimum requirements established by federal, state, and local laws and regulations.
 2. These requirements are amended frequently and the Contractor shall be responsible for complying with amendments as they become effective.
 3. In the event that compliance exceeds the scope of work or conflicts with specific requirements of the contract, notify the Owner's Representative immediately.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. General
 1. The Owner will provide materials required for the packaging, labeling, marking, placarding, and transportation hazardous materials in conformance with Department of Transportation standards.
 2. Details in this specification shall not be construed as establishing the limits of the Contractor's responsibility.
- B. Packaging
 1. The Owner shall provide bulk and non-bulk containers for packaging hazardous materials/wastes consistent with the authorizations referenced in the Hazardous Materials Table in 49 CFR 172.101, Column S.
 2. Bulk and non-bulk packaging shall meet the corresponding specifications in 49 CFR 173 referenced in the Hazardous Materials Table, 49 CFR 172.101.

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3. Each packaging shall conform to the general packaging requirements of Subpart B of 49 CFR 173, to the requirements of 49 CFR 178 at the specified packing group performance level, to the requirements of special provisions of column 7 of the Hazardous Materials Table in 49 CFR 172.101, and shall be compatible with the material to be packaged as required by 40 CFR 262.
4. The Owner will provide other packaging-related materials such as materials used to cushion or fill voids in overpacked containers, etc. Sorbent materials shall not be capable of reacting dangerously with, being decomposed by, or being ignited by the hazardous materials being packaged. Additionally, sorbents used to treat free liquids to be disposed of in landfills shall be non-biodegradable as specified in 40 CFR 264.314.
5. All loads of hazardous materials shall be covered whenever active loading is not in progress.

C. Markings

1. The Owner will provide markings for each hazardous material/waste package, freight container, and transport vehicle consistent with the requirements of 49 CFR 172, Subpart D, 40 CFR 262.32, and 40 CFR 61 (for hazardous air pollutants).
2. Markings must be capable of withstanding, without deterioration or substantial color change, a 180-day exposure to conditions reasonably encountered during container storage and transportation.

D. Labeling

1. The Owner will provide primary and subsidiary labels for hazardous materials/wastes consistent with the requirements in the Hazardous Materials Table in 49 CFR 172.101, Column 6.
2. Labels shall meet design specifications required by 49 CFR 172 (for hazardous air pollutants), Subpart E including size, shape, color, printing, and symbol requirements.
3. Labels shall be durable and weather resistant and capable of withstanding, without deterioration or substantial color change, a 180-day exposure to conditions reasonably expected to be encountered during container storage and transportation.

F. Spill Response Materials

1. Provide spill response materials including, but not limited to, containers, adsorbent, shovels, and personal protective equipment (PPE).
2. Spill response materials shall be available at all times in which hazardous materials/wastes are being handled or transported. Spill response materials shall be compatible with the type of material being handled.

2.2 EQUIPMENT AND TOOLS

- A.** Provide miscellaneous equipment and tools necessary to handle hazardous materials and hazardous wastes in a safe and environmentally sound manner.

PART 3 – EXECUTION

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SECTION 02120 - OFF-SITE TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL

3.1 EXAMINATION

- A. Non-analytical Saturated Soil Waste Identification
 - 1. Determine based on Owner supplied information, material safety data sheets, or labels; comply with Section 02110 - Excavation, Handling, and Disposal of Contaminated Soils.
- B. Identification of Suspected Saturated Soil Waste Using Analytical Techniques
 - 1. Comply with the requirements of Section 02110 – Excavation, Handling, and Disposal of Contaminated Soil.
- C. Identification of Non-hazardous Waste
 - 1. Determine based on Owner supplied information, material safety data sheets, or labels; regulations and regulatory guidance; and analytical data obtained for suspected Saturated Soil Wastes that document the absence of hazardous constituents.

3.2 PREPARATION

- A. Accumulation Area
 - 1. Secure area for accumulation of wastes; prevent unauthorized access when unattended.
 - 2. Prevent access by public
- B. Containers
 - 1. The Owner will provide containers in good condition, no dents, leaks, or rust; use Department of Transportation (DOT) drums that are compatible with the hazardous materials.
 - 2. The Contractor shall provide containers in good condition, no dents, leaks, or rust; use DOT drums that are compatible with the clean waste.
 - 3. Mark each container:
 - a. Contractor's name
 - b. Name of waste material
 - c. Date accumulation began
 - 4. Accumulation time
 - a. Remove wastes from accumulation area in accordance with 40 CFR 261 and 262.
 - b. Accumulation start date is the date that the Saturated Soil Waste is first placed in the container.

3.3 ON-SITE WASTE MANAGEMENT

- A. General
 - 1. Storing of Contractor-owned waste on site for any length of time is prohibited.
 - 2. Ensure compliance with federal, state, and local hazardous waste laws and regulations; verify requirements when preparing reports, waste shipment records, hazardous waste manifests, or other documents.

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B. Hazardous Waste Classification

1. The Owner will identify waste codes applicable to each hazardous waste stream (if encountered) based on requirements in 40 CFR 261 or any applicable state or local law or regulation.
2. The Owner will identify applicable treatment standards in 40 CFR 268 and state land disposal restrictions; determine whether or not the waste meets or exceeds the standards. The Owner will prepare waste profiles, analyses, classification, and treatment standards.

C. Accumulation

1. If temporary waste accumulation is required, separate and accumulate waste in designated contained stockpile storage areas.
2. All Saturated Soil Waste identified by the Owner's Representative shall be direct-loaded into containers. At no time shall Saturated Soil Wastes be stockpiled at the site.
3. Hazardous wastes stored at the site shall be kept in Contractor-supplied bulk storage containers and covered at all times when active loading is not in progress.
4. Comply with generator requirements in 40 CFR 262 and applicable state or local law or regulations when accumulating hazardous waste on site.
5. On-site accumulation times shall be restricted to applicable time frames referenced in 40 CFR 262.34 and any applicable state or local law or regulation.
6. Accumulation start dates shall commence when waste is first generated (i.e., containerized or otherwise collected for discard).

D. Containerized Waste

1. Once identified as hazardous waste, the Contractor will containerize using Contractor-supplied containers in good condition and compatible with the waste to be stored.
2. Containers are to be closed and covered except when adding or removing waste.
3. The Contractor shall place an additional marking on containers of "unknowns" designating the date sampled, and the suspected hazard.
4. The Contractor shall mark storage areas and bulk containers containing nonhazardous/nondangerous wastes by type of waste; segregate by treatment or disposal method.
5. Inspect containers for signs of deterioration; respond to spills or leaks.

E. Inspection

1. Inspect waste storage areas at least bi-weekly; provide written documentation of the inspection.
2. Inspection logs shall contain date and time of inspection, name of individual conducting the inspection, problems noted, and corrective actions taken.

3.4 OFF-SITE WASTE MANAGEMENT

A. General

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1. Use EPA Generator Identification (ID) Number provided by the Owner's Representative.
 2. Saturated Soil Wastes will be designated by the Owner's Representative in the field. Sampling to confirm waste designation by the Owner's representative may be necessary.
 3. Waste profiles shall be completed and approved by the off site TSD facility before transportation from the project site.
 4. Minimize the generation of Saturated Soil Waste to the maximum extent practicable; avoid mixing clean and contaminated wastes.
- B. Hazardous and Dangerous Waste Management
1. The Owner will use RCRA Subtitle C-permitted facilities that meet the requirements of 40 CFR 264 or facilities operating under interim status which meet the requirements of 40 CFR 265 for Saturated Soil Waste disposal.
 2. The Owner will use RCRA Subtitle D-permitted facilities that meet the requirements of 40 CFR 264 or facilities operating under interim status which meet the requirements of 40 CFR 265 for clean soil, and contaminated but non-hazardous waste disposal.
 - a. Do not use off-site treatment, storage, and/or disposal facilities with significant RCRA violations or compliance.
 - b. The Owner will use the Toxic Substance Control Act (TSCA)-permitted facilities that meet the requirements of 40 CFR 761 for disposal of PCB liquids.
- C. Solid Wastes, Construction Demolition, and Debris Management
1. The Owner shall use RCRA Subtitle D-permitted facilities or state permitted facilities for solid waste disposal.
 2. Segregate wastes as required to allow disposal in local or regional waste disposal facilities.
- D. Description of Treatment, Storage, and Disposal (TSD) Facility and Transporter
1. The Owner will provide EPA ID numbers, names, locations, and telephone numbers of TSD facilities and transporters.
 2. Status of the facility
 - a. Facilities receiving Saturated Soil Waste must be permitted in accordance with 40 CFR 270 or operating under interim status in accordance with 40 CFR 265 requirements or must be permitted by an authorized state program.
 - b. Facilities receiving solid wastes and special wastes must be permitted in accordance with state and local requirements.
- E. Packaging
1. The Contractor will properly package, label, and mark hazardous wastes in accordance with Department of Transportation, EPA, state, and local requirements.
 2. The Contractor shall properly package, label, and mark clean waste in accordance with DOT, EPA, state, and local requirements.

3.5 TRANSPORTATION

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- A. Solid Wastes
1. Prepare non-hazardous waste manifests or bills of lading for each shipment of waste from site.
 2. Non-hazardous waste manifests or bills of lading shall be approved and signed by Contractor prior to transporting solid wastes.
- B. Saturated Soil Wastes
1. Saturated Soil Wastes are to be disposed of in an equivalent manner to RCRA F034 wastes.
 2. The Owner will prepare uniform hazardous waste manifests for transporting Saturated Soil Wastes as required by 40 CFR 263 and Chapter 173-303 WAC.
 3. The Owner will complete manifests using instructions in 40 CFR 262, Subpart B and any applicable state or local laws or regulation.
 4. The Owner will prepare manifests and waste profiles.
 5. The Owner will prepare land disposal restriction notifications as required by 40 CFR 268 or any applicable state or local law or regulation for each shipment of Saturated Soil Waste. Notifications shall be submitted with the manifest to the Owner's Representative for review and approval.
 6. Hazardous waste manifests and notifications shall be approved and signed by the Owner's Representative prior to transporting Saturated Soil Waste.
- C. Identification of Proper Shipping Names
1. The Owner will use 49 CFR 172.101 to identify proper shipping names for each hazardous material to be shipped off site.
- D. Packaging, Labeling, and Marking
1. The Owner will package, label, and mark hazardous materials/wastes using the specified materials and in accordance with the referenced authorizations.
 2. The Contractor will mark each container of hazardous waste of 110 gallons or less with the following:

SATURATED SOIL WASTE - Federal Law Prohibits Improper Disposal.
If found, contact the nearest police or public safety authority or the
U.S. Environmental Protection Agency.
Generator's name
Manifest Document Number
- E. Shipping Documents
1. Each shipment of hazardous material sent off site shall be accompanied by properly completed shipping documents.
- F. Other Hazardous Material Shipment Documents
1. The Owner will prepare a bill of lading for each shipment of hazardous material that is not accompanied by a hazardous waste manifest, which fulfills the shipping paper requirements.

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2. Bill of lading shall satisfy the requirements of 49 CFR 172, Subpart C (and 40 CFR 279 if shipping used oil) and applicable state or local law or regulation.
3. For laboratory samples, the Owner will prepare bills of lading and other documentation as necessary to satisfy conditions of the sample exclusions in 40 CFR 261.4(d) and (e) and applicable state or local law or regulation.
4. Owner's Representative shall sign bills of lading requiring shipper's certifications.

G. Spill Response

1. Respond to any spill of hazardous materials or hazardous waste that are in the custody or care of the Contractor.
2. Comply with applicable requirements of federal, state, or local laws or regulations regarding any spill incident.

H. Emergency Contacts

1. Comply with the emergency contact provisions in 49 CFR 172.604.
2. Provide a 24-hour emergency response contact and phone number of a person knowledgeable about the hazardous materials being shipped and who has comprehensive emergency response and incident mitigation information for that material, or has immediate access to a person who possesses such knowledge and information.
3. Write emergency contact name and phone number on all hazardous materials shipping documents.
4. Post at areas in which hazardous wastes are managed:
 - a. The name of the emergency coordinator.
 - b. Phone number through which the emergency coordinator can be contacted on a 24-hour basis.
 - c. Telephone number of the local fire department.
 - d. Location of fire extinguishers and spill control materials.

3.6 OFF-SITE WASTE DISPOSAL

A. Treatment and Disposal of Saturated Soil Wastes

1. The Owner will transport to an approved hazardous waste treatment, storage, or disposal facility prior to project completion, and no later than 90 days after wastes are initially placed in the storage container.
2. The Owner will ship Saturated Soil Waste only to facilities that are properly permitted to accept the waste or operating under interim status.
3. The Owner will make provisions to treat wastes to meet land disposal treatment standards in 40 CFR 268 prior to land disposal or TSCA disposal requirements in 40 CFR 761, as applicable.

B. Treatment and Disposal of Solid Wastes

1. The Owner will transport to an approved treatment, storage, or disposal facility.
2. Ship solid wastes only to facilities that are properly permitted to accept the wastes.

C. Records

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SECTION 02120 - OFF-SITE TRANSPORT AND DISPOSAL OF CONTAMINATED SOIL

1. Maintain adequate records to support information provided to the Owner's Representative regarding exception reports, annual reports, and biennial reports.

3.7 TRANSPORTATION AND DISPOSAL REPORTING

- A. Provide the following information in a Project Closeout Report.
- B. Saturated Soil Waste
 1. The Owner will complete manifest packages, including final manifest signed by TSD facility.
 2. Certificates of disposal.
 3. Exception reports, discrepancy reports, and notices of violation.
 4. Corrective action documentation.
- C. Solid Wastes
 1. Type and quantity of wastes.
 2. Copies of bills of lading and receiving facility receipts, including weigh scale tickets.

END OF SECTION 02120

APPENDIX F

**IMPORTANT INFORMATION ABOUT YOUR
ENVIRONMENTAL REPORT**



Date: June 14, 2006
To: Martin Selig Real Estate
Attn: Mr. Jim Light

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors which were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland